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Claims

1. A phacoemulsification needle comprising a shaft,
a tip, disposed at a distal end of said shaft, said tip having a larger outside diameter than said shaft and an aspiration lumen extending through said shaft and said tip, the tip having an opening communicating with said aspiration lumen,
wherein said tip has a ball-shaped surface and wherein the tip has a flat distal end comprising said opening.
2. The needle according to claim 1, wherein said tip has at its distal end rounded edges.
3. The needle according to claim 1, wherein said flat distal end is formed by said opening.
4. The needle according to claim 1, wherein the part of said aspiration lumen extending within the tip is rectilinear.
5. The needle according to claim 1, wherein the needle is angled.
6. The needle according to claim 1, wherein said opening has a larger diameter than the part of the aspiration lumen extending within said shaft.
7. The needle according to claim 1, wherein said aspiration lumen comprises a step within the tip.
8. The needle according to claim 1, wherein said opening has a

diameter of approximately 0.8 mm.

9. The needle according to claim 2, wherein said edges have a radius of curvature of approximately 0.15 mm.
10. The needle according to claim 1, wherein said tip comprises a slit extending in longitudinal direction of the needle and communicating with said aspiration lumen.
11. A phacoemulsification needle comprising
a shaft,
a tip, disposed at a distal end of said shaft, said tip having a larger outer diameter than said shaft and
an aspiration lumen extending through said shaft and said tip, the tip having an opening communicating with said aspiration lumen,
wherein said tip has a curved shape and wherein the tip has a distal end comprising said opening.
12. The needle according to claim 11, wherein said tip has at its distal end rounded edges.
13. The needle according to claim 11, wherein said flat distal end is formed by said opening.
14. The needle according to claim 11, wherein the part of said aspiration lumen extending within the tip is rectilinear.
15. The needle according to claim 11, wherein the needle is angled.
16. The needle according to claim 11, wherein said opening has a larger diameter than the part of the aspiration lumen extend-

ing within said shaft.

17. The needle according to claim 11, wherein said opening has a smaller diameter than the part of the aspiration lumen extending within said shaft.
18. The needle according to claim 11, wherein said aspiration lumen comprises a step within the tip.
19. The needle according to claim 11, wherein said aspiration lumen comprises a step within the shaft.
20. The needle according to claim 11, wherein said opening has a diameter of 0.3 mm to 0.8 mm.
21. The needle according to claim 12, wherein said edges have a radius of curvature of 0.1 mm to 0.15 mm.
22. The needle according to claim 11, wherein said tip comprises a slit extending in longitudinal direction of the needle and communicating with said aspiration lumen.
23. The needle according to claim 11, wherein said shaft comprises an opening extending through its surface, the opening communicating with said aspiration lumen.
24. A phacoemulsification needle comprising
a shaft,
a tip, disposed at a distal end of said shaft, said tip having a larger outer diameter than said shaft and
an aspiration lumen extending through said shaft and said tip, the tip having an opening communicating with said aspiration lumen,

wherein said tip has a curved shape, the tip comprising a distal end and at least two openings being arranged in the region of said distal end.

25. The needle according to claim 24, wherein the tip comprises four openings.
26. The needle according to claim 24, wherein the distal end has a curved surface.
27. The needle according to claim 24, wherein the at least two openings have rounded edges.